

WHAT IS CLAIMED IS:

1. A surface-emitting light emitting device capable of emitting light in a direction perpendicular to a substrate, comprising:
an emitting surface that emits the light;
a base member that is provided on the emitting surface; and
an optical member that is provided on an upper surface of the base member.
2. The surface-emitting light emitting device according to Claim 1,
the base member being made of a material that transmits light of a predetermined wavelength.
3. The surface-emitting light emitting device according to Claim 1,
the optical member functioning as a lens.
4. The surface-emitting light emitting device according to Claim 1,
the optical member functioning as a polarizer.
5. The surface-emitting light emitting device according to Claim 1,
the optical member being in the shape of a sphere or an oval sphere.
6. The surface-emitting light emitting device according to any of Claim 1,
a sealing member being formed so as to cover at least part of the optical member.
7. The surface-emitting light emitting device according to Claim 1,
the upper surface of the base member being a curved surface.
8. The surface-emitting light emitting device according to Claim 1,
an angle made between the upper surface of the base member and a surface on a side part of the base member that contacts the upper surface being an acute angle.
9. The surface-emitting light emitting device according to any of Claim 1,
the surface-emitting light emitting device being a surface-emitting semiconductor laser.
10. The surface-emitting light emitting device according to Claim 9,
the substrate being a semiconductor substrate; and
the surface-emitting semiconductor laser being formed on the semiconductor substrate, includes a resonator having a pillar portion, and the emitting surface provided on an upper surface of the pillar portion.
11. The surface-emitting light emitting device according to Claim 9,
the substrate being a semiconductor substrate;

the surface-emitting semiconductor laser including a resonator formed on the semiconductor substrate; and

the emitting surface being provided on a rear surface of the semiconductor substrate.

12. The surface-emitting light emitting device according to Claim 9,
the substrate being a semiconductor substrate;
the surface-emitting semiconductor laser including a resonator formed on the semiconductor substrate;

a concave part being formed in a rear surface of the semiconductor substrate;
a light path adjusting layer being formed by being buried in the concave part;
and

the emitting surface being provided on an upper surface of the light path adjusting layer.

13. The surface-emitting light emitting device according to Claim 1,
the surface-emitting light emitting device being a semiconductor light emitting diode.

14. The surface-emitting light emitting device according to Claim 13,
the substrate being a semiconductor substrate;
the semiconductor light emitting diode including a light emitting element that is formed on the semiconductor substrate, and a pillar portion that includes an active layer that forms at least part of the light emitting element; and

the emitting surface is provided on an upper surface of the pillar portion.

15. The surface-emitting light emitting device according to Claim 10,
the base member being formed integrally with the pillar portion.

16. The surface-emitting light emitting device according to Claim 15,
the base member being composed of a semiconductor layer.

17. The surface-emitting light emitting device according to Claim 1,
the surface-emitting light emitting device being an electroluminescent device.

18. The surface-emitting light emitting device according to Claim 10,
the pillar portion functioning as the base member.

19. The surface-emitting light emitting device according to Claim 1,
the optical member functioning as a lens and being in the form of a truncated sphere;

a refractive index of the optical member being approximately equal to a refractive index of the base member;

a radius of curvature "r" of the optical member and a distance "d" from the emitting surface to a highest point of the optical member satisfies,

$$r \leq 0.34 * d.$$

20. An optical module, comprising:
the surface-emitting light emitting device according to Claim 1, and an optical wave-guide.
21. An optical transmission apparatus, comprising:
the optical module according to Claim 20.
22. A method of manufacturing a surface-emitting light emitting device capable of emitting light in a direction perpendicular to a substrate, comprising:
 - (a) forming a part that has an emitting surface and functions as the light emitting element;
 - (b) forming a base member on the substrate;
 - (c) discharging a droplet onto an upper surface of the base member to form an optical member precursor; and
 - (d) hardening the optical member precursor to form an optical member.
23. The method of manufacturing the surface-emitting light emitting device according to Claim 22,
the droplet being discharged by using an ink jet method in step (c).
24. The method of manufacturing a surface-emitting light emitting device according to Claim 22, further comprising:
 - (e) adjusting wettability of the upper surface of the base member with respect to the droplet before (c).